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No. 8.

Prof. A. CAYLEY, F.R.S., Vice-President, in the Chair.

M. Edouard G. Deville, Quebec ; and

John Frederic Main, Esq., B.A., University College, Bristol ;

were balloted for and duly elected Fellows of the Society.

On the late Opposition of Mars. By Maxwell Hall, Esq.

(*Extract from a Letter to the Astronomer Royal.*)

The contrast of the style of work to be performed in Transits and Oppositions is so strongly marked by my small telescope that for the future I shall pay attention to Oppositions alone, although Jamaica is well situated for some of the phases of the next transit of *Venus*.

You may perhaps remember that the observations made here during the last Opposition of *Mars* were so completely under control that they tested the going of the clock for very short intervals of time, and plainly showed that a good clock and a firmly mounted Equatoreal would give the solar parallax with great accuracy, in accordance with your article written in the year 1857.

I am awaiting the results of Mr. Gill's observations made with a Heliometer in the Island of Ascension ; it would seem that they require some time for their reduction ; and the system of triangulation of the comparison stars is certainly open to the objection that half the time and labour must be expended on the stars themselves instead of *Mars*, unless the triangulation is performed about midnight, when the circumstances of refraction will be different. In my extension of your method, by comparing *Mars* with two stars in the same sweep, one preceding and the other following, the work of connecting the stars together for

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controlling the reductions is made a part of the observations of *Mars* for the determination of the parallax.

The Observatory, Jamaica,
1878, May 7.

Note on the Great Comet of 1861. By J. Tebbutt, Esq.

In many of the recent popular works on astronomy I have noticed that frequent references are made to the fact that European astronomers have shown that the Earth passed through, or very near, the tail of the great comet of 1861. As I was not in communication with the European scientific journals at the time of this comet's appearance, my discovery of it was not announced directly to them, nor were the results of my observations and calculations made known in the same way. I wish therefore to put on record as briefly as possible, in the *Monthly Notices*, that I claim to be not only the first observer of the comet, but also the first calculator of the elements of its orbit. Having assured myself by means of the imperfect instruments at my command that the object discovered on May 13, 1861, was really a comet, for it moved extremely slowly for some days, I announced the discovery to the Sydney Observatory on May 21, and in the *Sydney Morning Herald* of May 25. My approximate determination of the orbit from an observation at the Sydney Observatory, on May 24, and sextant observations by myself at Windsor, on June 3 and 11, appeared as follows in the *Herald* of June 15:—

Perihelion passage	June 13 ^d .7253 G.M.T.
Perihelion distance	0.82033
Longitude of ascending node	280° 0' 44"
Longitude of perihelion on the orbit	252 13 39
Inclination of the orbit	86 18 42
Heliocentric motion	Direct.

In the same communication I pointed out the near approach of the Earth to the comet's tail for June 29, and also that the comet itself would probably become visible in full daylight. This announcement was followed by a more complete prediction by me in the *Sydney Empire* of June 22. The next published elements are those of the Rev. W. Scott, Government Astronomer, and Mr. H. S. Hawkins, M.A., of Goulburn, which appeared respectively in the *Herald* of June 27 and July 1.

As little seems to be known in the northern hemisphere respecting the early history of this comet, and as the newspapers which treat of it are of an ephemeral character, I have communicated this Note to the Society.

Windsor, N. S. Wales,
April 22, 1878.